males, 10% and 7% were children and females respectively. Majority of the males (79%) were between the ages of 15-35 years of age. On an average the direct cost incurred to treat the injured cases (103) was PKR13,000 excluding subsidy of at least PKR53,000. The total cost was PKR66,000 (USD805) and this cost shall be considered as minimum cost. **CONCLUSIONS:** Motorcycle accidents are incurring huge economic burden on society. The morbidity and mortality can be reduced by legislative action concerning helmet use, licensing and rigid enforcement of traffic laws. Rehabilitation services for the victims to get fully recovered may also be provided to reduce the future economic loss.

PMS25

ECONOMIC EVALUATION OF PHARMACOLOGICAL THROMBOPROPHYLAXIS IN HIP SURGERY PATIENTS IN MEXICO

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OBJECTIVES: Orthopedic surgery has been associated with significant risk of develop deep vein thrombosis (DVT). The objective of this study was to estimate the cost-effectiveness of thromboprophylaxis therapies for prevention of DVT associated in patients undergoing hip surgery from an institutional perspective (Mexican Social Security Institute, IMSS). **METHODS:** Economic and health consequences of thromboprophylaxis were assessed through a six-state Markov model (one-year time horizon, one-week cycles). Effectiveness measure was reduction in DVT (per 1000 patients). Effectiveness was estimated by local meta-analysis. Doses of alternatives compared were: warfarin (basecase, 5mg 30d); dalteparin (not listed in Mexican formulary, 5000 IU/day 30d); acenocoumarol (4 mg/day 30d); enoxaparin (40 mg/day 30d); nadroparin (5700 IU/day 30d) and unfractionated heparin (UFH) plus warfarin (10000 IU/day 10d+warfarin 5 mg/day 20d). No prophylaxis was assessed too. Resource use and unit costs were extracted from IMSS databases (dalteparin cost was provided by the manufacturer). Costs included outpatient and inpatient services, medication costs, imaging and laboratory tests. Univariate sensitivity analysis was performed. Acceptability curves were constructed. **RESULTS:** DVT cases per alternative were: warfarin 61 (CI 95% 60–62); dalteparin 33 (32–34); acenocoumarol 80 (78–82); enoxaparin 57 (56–58); nadroparin 67 (66–68); no prophylaxis 212 (205–219) and UFH 229 (223–235). Per patient annual cost (2011 US$) were: warfarin $3071.34 ($3049.23- $3093.44); dalteparin $2,980.42 ($2958.14-$3002.71); acenocoumarol $2966.93 ($2940.92–$2992.94); enoxaparin $3668.54 ($3631.18–$3705.90); nadroparin $3291.15 ($3260.60–$3321.70); no prophylaxis $3466.68 ($3407.63–$3525.73) and UFH $3356.00 ($3311.59–$3400.41). Warfarin was dominated by dalteparin, Dalteparin is cost-saving, compared to enoxaparin, nadroparin, UFH and no prophylaxis. Regarding warfarin, ICER (per DVT case avoided) of enoxaparin and acenocoumarol resulted in $149.30 ($146.24-$152.36) and $5.49 ($5.38-5.61), respectively. Acceptability curves showed that results were robust. **CONCLUSIONS:** At IMSS, dalteparin would be a cost-saving or cost-effective therapy for thromboprophylaxis in patients undergoing hip surgery.

PMS26

COST-EFFECTIVENESS OF DENOSUMAB VERSUS ORAL BISPHOSPHONATES IN THE UNITED STATES FOR POST-MENOPAUSAL OSTEOPOROSIS (PMO)

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OBJECTIVES: Cost-effectiveness of denosumab versus oral bisphosphonates in PMO from a US third party payer perspective was evaluated. **METHODS:** A lifetime cohort Markov model was developed with seven health states: well, hip fracture, vertebral fracture, other osteoporotic fracture, post hip fracture, post vertebral fracture, and dead. During each cycle, a patient could fracture, remain healthy, remain in a post fracture state or die. Relative fracture risk reduction, background fracture risks, mortality rates, utilities, medical and drug costs were derived using published sources. Expected costs and quality-adjusted life years (QALYs) were estimated for denosumab, risedronate, ibandronate, and generic alendronate in the overall PMO population and high risk subgroups: 1) 2 of the 3 risks i.e., >70years-old, bone mineral density T-score≤-3.0 and prevalent vertebral fracture, and 2) ≥75 years-old. Costs and QALYs were discounted at 3% annually. Extensive sensitivity analyses were conducted. **RESULTS:** In the overall PMO population, total lifetime costs for alendronate, risedronate, denosumab, and ibandronate were $55,500, $58,200, $58,800 and $59,800, respectively. Total QALYs were 8.33, 8.33, 8.37 and 8.32, respectively. The incremental cost-effectiveness ratio (ICER) for denosumab versus generic alendronate was $103,000/QALY. Risedronate was dominated by alendronate and ibandronate was dominated by denosumab. In high risk subgroup (a), total costs for alendronate, denosumab, risedronate and ibandronate were $60,900, $62,200, $64,100 and $66,600, respectively. Total QALYs were 7.27, 7.32, 7.27 and 7.26, respectively. Denosumab had an ICER of $28,200/QALY versus generic alendronate and dominated all other strategies. Denosumab dominated all strategies in women ≥75 years. Results between denosumab and generic alendronate were most sensitive to the relative risk of hip fracture for denosumab and the cost of denosumab. **CONCLUSIONS:** In each PMO population examined, denosumab represented good value for money compared to branded bisphosphonates. Furthermore, denosumab was either cost-effective or dominant compared to generic alendronate in the high-risk subgroups.

PMS27

THE COST-EFFECTIVENESS OF DENOSUMAB FOR THE PREVENTION OF OSTEOPOROTIC FRACTURES IN THE SETTING OF THE UNITED STATES

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OBJECTIVES: The study compares the cost-effectiveness of denosumab (Prolia®; Amgen, Thousand Oaks, CA) to generic alendronate in preventing osteoporotic fracture among elderly women in the US setting. **METHODS:** This study utilized the published literature, government data and organization websites to obtain model parameters and parameter ranges. It used a "backward induction model" to analyze incremental cost per quality adjusted life year (QALY) saved from a societal perspective. The model evaluated women from age 50 to 95, using 5 year time intervals for intermediate results. The willingness-to-pay cut-off threshold used was $150,000/QALY. One-way sensitivity analyses and probabilistic sensitivity analyses were conducted to examine the robustness of the findings. **RESULTS:** When it was assumed that a patient could suffer at most one hip fracture, the discounted cost of denosumab therapy was $15,797 more than alendronate therapy, and the increased QALY was 0.007. This leads to an incremental cost-effectiveness ratio (ICER) average estimate of $2,111,647. When a patient was assumed to have at most two hip fractures and potentially experience other fractures after the first hip fracture (e.g., fractures of the wrist, spine, etc.), denosumab therapy would average 0.013 more QALYs than alendronate therapy, and the ICER was estimated to be $1,176,275. One-way sensitivity analyses did not change the base case results substantially. Probabilistic sensitivity analyses suggested that the probabilities were very small of the ICER meeting conventional willingness-to-pay cut-off ratios in both one-hip-fracture-model and two-or more-fractures-models. **CONCLUSIONS:** In the base case, due to the high acquisition cost, denosumab was not found to be cost-effective for the prevention of osteoporotic fractures compared with generic alendronate. A large change in probability of hip fracture or probabilities of all fractures could make it cost-effective, but this would likely require new predictive tools or biomarkers to target denosumab therapy to very high-risk patients.

PMS28

ECONOMIC EVALUATION OF THE USE OF ANTI TNF'S AND TOCILIZUMAB FOR THE TREATMENT OF SYSTEMIC JUVENILE IDIOPATHIC ARTHRITIS (SJIA) IN MEXICO

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OBJECTIVES: Juvenile Idiopathic Arthritis (JIA) is defined as arthritis (diagnosed by limitation in mobility, pain, pressure and local heat) in 1 or more joints for more than 6 weeks without an apparent etiology, prior to age 16 of age. In particular, the presentation systemic JIA (sJIA) is manifested clinically as chronic arthritis accompanied by intermittent fever, rash, anemia, hepatomegaly and/or splenomegaly and pericarditis and/or pleuritis, in both genders during all pediatric stages. To evaluate the cost-effectiveness of different biological therapies and identify which one is dominant for the treatment of sJIA in Mexico. **METHODS:** It was done an evaluation of cost-effectiveness of using Tocilizumab, Etanercept, Adalimumab, Infliximab and placebo as a treatment for sJIA in a model of decision time horizon of 12 weeks. Costs are expressed in US dollars. **RESULTS:** Tocilizumab demonstrated superior effectiveness in patients achieving 71.6% ACR Pedi 70, with a cost per patient of $ 2,022, followed by Etanercept, Infliximab and Adalimumab with 24.8% at a cost of $ 1,260, $ 2,621 and $ 2,760 respectively in the base case. The expected cost to achieve one patient reaching an ACR Pedi 70 was significantly lower with tocilizumab than with the rest of the alternatives. The decision to use Tocilizumab for the treatment of sJIA would reduce the cost of getting a patient to achieve an ACR Pedi 70 in almost half the cost per response ratio calculated for Etanercept and reducing this value by about three-quarters compared with the estimated cost with Infliximab or Adalimumab. The results show that Tocilizumab is cost-effective ($ 1,886) and the dominant alternative compared to Etanercept ($ 2,702), Infliximab ($ 11,898) and Adalimumab ($ 12,835). **CONCLUSIONS:** The cost-effectiveness analysis showed that tocilizumab is cost-effective and is the dominant strategy over Infliximab, Adalimumab and Etanercept for the treatment of sJIA in Mexico.

PMS29

COST-EFFECTIVENESS OF COLLAGENASE CLOSTRIDIUM HISTOLYTICUM, LIMITED FASCIECTOMY, AND PERCUTANEOUS NEEDLE FASCIOTOMY IN THE TREATMENT OF DUPUYTREN'S CONTRACTURE

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OBJECTIVES: To determine the cost-effectiveness of treating Dupuytren's contracture with collagenase clostridium histolyticum (CCH), limited fasciectomy (LF), and percutaneous needle fasciotomy (PNF). **METHODS:** A Markov decision model was constructed based on published reports of effectiveness, adverse consequences, population-based preferences, and medical costs for the treatment of Dupuytren's contracture – a debilitating condition of the hands. The study perspective was from that of a US payer, such as a commercial insurer. The Markov model classified patients as either experiencing 1) clinical success after treatment; 2) treatment failure –resulting in the need for revision procedures; 3) disease progression; or 4) death. The model used yearly cycles over a 30-year period and took into account recurrence rates and common side effects with each treatment. Clinical trials evaluating the efficacy of the three approaches to treatment defined clinical success inconsistently. As a consequence, the primary analysis assumed equal efficacy across the treatments. Probabilistic sensitivity analysis was conducted using a Monte Carlo simulation with distributions for efficacy, adverse events, and costs. A societal discount rate of 3% was used for both cost and effect. The results are presented in terms of cost per quality-adjusted life years (QALYs). **RESULTS:** The estimated mean (SD) costs over the 30-year period for CCH, LF, and PNF were $4,489 (418), $18,345 (294), and $14,970 (599), respectively. The number of QALYs for CCH